



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/559,866	05/25/2006	Stefan Haaks	2003P08367WOUS	7442

22116 7590 09/03/2009  
SIEMENS CORPORATION  
INTELLECTUAL PROPERTY DEPARTMENT  
170 WOOD AVENUE SOUTH  
ISELIN, NJ 08830

EXAMINER
----------

RAO, SHEELA S

ART UNIT	PAPER NUMBER
----------	--------------

2123

MAIL DATE	DELIVERY MODE
-----------	---------------

09/03/2009

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/559,866	<b>Applicant(s)</b> HAAKS ET AL.	
	<b>Examiner</b> Sheela Rao	<b>Art Unit</b> 2123	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 15 May 2009.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 10-18 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 10-18 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 October 2008 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

**DETAILED ACTION**

1. In view of the appeal brief filed on 15 May 2009, PROSECUTION IS HEREBY REOPENED. A new Office action is set forth below.

To avoid abandonment of the application, appellant must exercise one of the following two options:

(1) file a reply under 37 CFR 1.111 (if this Office action is non-final) or a reply under 37 CFR 1.113 (if this Office action is final); or,

(2) initiate a new appeal by filing a notice of appeal under 37 CFR 41.31 followed by an appeal brief under 37 CFR 41.37. The previously paid notice of appeal fee and appeal brief fee can be applied to the new appeal. If, however, the appeal fees set forth in 37 CFR 41.20 have been increased since they were previously paid, then appellant must pay the difference between the increased fees and the amount previously paid.

A Supervisory Patent Examiner (SPE) has approved of reopening prosecution by signing below.

/Paul L Rodriguez/

Supervisory Patent Examiner, Art Unit 2123

2. Claims 10-18 are pending and presented for examination.

***Response to Amendment***

3. The rejection of claims 10-18 under 35 USC §102(b) or 35 USC §103(a) as being anticipated by/unpatentable over Eryurek et al. (US Patent Application Publication No. US 2003/0045962) are withdrawn.

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. Claims 10-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent Application Publication No. US 2003/0045962 A1 to Eryurek et al. in view of US Patent No. US 5,034,897 to Sainen.

Independent claim 10 is directed to a method for increasing the capacity of an installation used to carry out an industrial process, comprising determining a plurality of process variables relevant for the capacity of the installation (in the reference by Eryurek paragraph [0002] defines the process variables); recording the process variables during changing operating conditions of the installation (paragraph [0014] of Eryurek describes the use of a microprocessor and its memory for storing data); determining a minimum control reserve of a plurality of control loops of the installation on the basis of the recorded process variables (paragraph [0009] of Eryurek teaches the use of a model to determine control information and the output of the process based

upon the process variables); determining actions that increase the capacity of the installation, where the determined actions are based on the determined minimum control reserves (paragraph [0009] of Eryurek teaches the output of the model as being indicative of a quality measurement, wherein the model is later used to adjust setpoints accordingly; and implementing the actions resulting in an increase in installation capacity (paragraph [0009] of Eryurek continues to explain how the data obtained from the model is used to 'implement' changes to the process setpoints or control algorithms accordingly). Although Eryurek teaches a method of determining a minimum control reserve, taking actions that increase the capacity and implementing such actions, Eryurek does not disclose the elements of the instant invention to the extent of the claimed limitations. For this reason, the prior art of Sainen is introduced. Sainen teaches of an optimum loom control method which enables the overall profit of a weaving mill to be maximized. In doing so, Sainen teaches of using a controlled factor or factors that corresponds to a controllable variable or variables, including profit evaluation functions, i.e. variables affecting profit, quality, effective number of picks equivalent to quantity produced, operating rates, energy consumption, which is carried out in a centralized control mode, i.e. control loop. The optimum loom control method includes controlling the loom on the basis of data representing capacity by raising the operating speed only when at least one of the control parameters has allowance, with respect to a corresponding value, i.e. control reserves. Determining actions that increase the capacity of the system based on the calculated parameters is explained in col. 4:ll. 34 et seq. and col. 6:ll. 60 et seq. of Sainen and the use of feedback in a control loop environment is shown in Figs. 1, 6 and 10. It would have been obvious to one of

ordinary skill in the art at the time the invention was made to have included the optimization methodology of Sainen with that of Eryruek since it is well known that an increase in quality leads to increased capacity of production.

Claim 11 further comprises the steps of defining a desired increase in the capacity of the installation, determining the control reserves in the control loops of the installation necessary for the desired capacity increase, and determining the control loops with a control reserve that is too small for the desired capacity increase.

Paragraph [0009] teaches that the model is used to provide measurements related to the product output and then uses this data to assess the quality of the process output.

In claim 12 the step of investigation of the control loops with a control reserve that is too small and formulation of potential actions for producing the control reserves required in each case by relieving the load on the relevant control loops and/or by replacing components in the relevant control loops by higher- capacity components is claimed. Eryurek teaches this aspect of the instant invention in paragraph [0010] wherein a deviation in the product quality is detected prior to the actual production of the product and adjustments are made therefrom.

As per claim 13 the step of performing a technical and/or commercial evaluation of the potential actions are essentially carried through in the manufacturing techniques of the paper or paper pulp industry as per the prior art of reference as described beginning in paragraph [0009].

The core process being defined for determining the relevant process variables and interfaces of the core process with ancillary processes surrounding them being investigated for an effect relationship with a process variable representing the capacity

of the installation as claimed in claim 14 is taught in paragraph [0011] of the prior art reference.

Claim 15 defines the installation as an installation for execution of a continuous process such as the manufacture of paper, textiles, plastic or metal foils. Eryurek teaches such in paragraph [0001] as the described process is within a paper manufacturing environment.

Paragraph [0002] teaches the limitation of claim 16, wherein the capacity of the installation is determined by the speed of production on the production line is claimed.

Claim 17 defines the method according to claim 11 as executed by a service provider company. Although Eryurek does not specifically state the control process being executed by a service provider company, it is well known in the art for specific manufacturing and production companies to undertake the processing of certain products or processes for delivery to other industries. Sainen discusses the different environments that the patented system/method could be used in, in column 14 at lines 5-9. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have a paper manufacturing company produce the paper for another industry as it would involve an innumerable amount of services and products for a non-paper manufacturer to produce paper, resulting in wasted time, expenses, and operations.

2. Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent Application Publication No. US 2003/0045962 A1 to Eryurek et al. in view of US

Patent No. US 5,034,897 to Sainen, as applied to claim 10, and further in view of US Patent No. US 5,281,343 A to Lewis et al.

Claim 18 defines the process variables of claim 15 as being filtered approximately every 2 seconds and sampled approximately every 5 seconds when they are recorded. Eryurek teaches the production of paper but does not explicitly disclose the process of doing so with regard to filtering and sampling. However, the prior art by Lewis et al. teaches that in a paper manufacturing process, filtering and sampling of dispersed solids is a necessary requirement. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have included the aspects of the paper manufacturing process as per Lewis to the controlling method of Eryurek so as to teach the complete manufacturing of paper in a controlled process. The specific time limits as claimed is a design choice as it is well known to specify time constraints in different process controlling methods.

### ***Response to Arguments***

3. Applicant's arguments with respect to claims 10-18 have been considered but are moot in view of the new ground(s) of rejection.

### ***Conclusion***

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sheela Rao whose telephone number is (571) 272-3751. The examiner can normally be reached Monday - Wednesday from 9:00 am to 3:00 pm.



If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul Rodriguez, can be reached on (571) 272-3753. The fax number for the organization where this application or any proceeding papers has been assigned is (571) 273- 8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. It should be noted that status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see [http:// pair-direct.uspto.gov](http://pair-direct.uspto.gov). Should any questions arise regarding access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Sheela Rao/  
Examiner, Art Unit 2123  
August 24, 2009

/Paul L Rodriguez/

Supervisory Patent Examiner, Art Unit 2123